

SPECIFICATION AMENDMENTS

1. Please **replace** the Abstract with the new Abstract that is submitted on a separate sheet, attached hereto. (37 CFR 1.72 and 1.121).

2. Please **amend** the paragraph which begins on page 20, line 19, as follows:

As mentioned in the Microelectromechanical Systems Having Trench Isolated Contacts Patent Application, contact 24 may remain partially, substantially or entirely surrounded by portions of first and second sacrificial layers 36 and/or 38. For example, with reference to FIGURE 3E, while mechanical structures ~~20a-d~~ 16a-16d are released from their respective underlying oxide columns, a portion 44 of sacrificial layer 38 (i.e., juxtaposed electrical contact area 24 may remain after etching or removing second sacrificial layer 38.

3. Please **amend** the paragraph which begins on page 22, line 3, as follows:

Thereafter, with reference to FIGURE ~~3K~~ 3J, anti-stiction channel window 56 may be formed and/or etched in insulation layer 50, using conventional etching techniques, in order to define the location of anti-stiction channel 32 (see, FIGURE 3K). The anti-stiction channel 32 is formed through encapsulation layer(s) 30 to provide access to mechanical structures 16a-d. (~~see, FIGURE 3K~~). The anti-stiction channel 32 may be formed using, for example, well-known anisotropic etching techniques (for example, deep reactive ion etching).

4. Please **amend** the paragraph which begins on page 22, line 9, as follows:

After formation of anti-stiction channel 32, an anti-stiction fluid may be introduced into chamber 26. The anti-stiction fluid may be, for example, DDMS, OTS, PFOTCS, PFDA, FDTS, PFPE and/or FOTS. Indeed, any anti-

stiction fluid may be employed provided that the subsequent processes do not destroy the anti-stiction characteristics and/or destroy or obliterate the anti-stiction deposition on mechanical structures 16a-d of MEMS 12. In this way, the anti-stiction layer 58 (exemplary illustration in FIGURE 4), for example, the monolayer coating formed on mechanical structures 16a-d, remains relatively intact and mechanical structures 16a-d include suitable anti-adhesive properties to overcome the adhesive forces of adjacent structures or elements in MEMS 10.

5. Please **amend** the paragraph which begins on page 24, line 10, as follows:

In another embodiment of the present invention, a vertical and/or horizontal trap is formed in the vicinity of anti-stiction channel 32. The trap 60 may be positioned between anti-stiction channel 32 and mechanical structures 16a-d (see, for example, FIGURE 5). In this way, where certain materials (i.e., the material(s) used to form channel plug 34) are employed to seal, plug and/or close anti-stiction channel 32 that may escape from anti-stiction channel 32, trap 60 "captures" or "catches" that material before it enters that portion of chamber 26 where mechanical structures 16a-d reside.

Under this circumstance, the channel plug material that enters chamber 26 is routed away from mechanical structures 16a-d and, as such, is "prevented" from contacting and/or impacting mechanical structures 16a-d and the operation thereof. For example, with reference to FIGURE 5, trap 60 may be a substantially vertical trap, which is located between anti-stiction channel 32 and mechanical structures 16a-d.

6. Please **amend** the paragraph which begins on page 27, line 15, as follows:

It should be noted that the present invention may be implemented in a MEMS including micromachined mechanical structure as well as data processing electronics and/or interface circuitry. With reference to FIGURE

12, in one exemplary embodiment, MEMS 10 includes micromachined mechanical structure 12 that is disposed on substrate 14, for example, an undoped semiconductor-like material, a glass-like material, or an insulator-like material. The MEMS 10 may also include data processing electronics 46 70 to process and analyze information generated by, and/or control or monitor the operation of micromachined mechanical structure 12. In addition, MEMS 10 may also include interface circuitry 48 72 to provide information from micromachined mechanical structure 12 and/or data processing electronics 46 70 to an external device (not illustrated), for example, a computer, indicator/display and/or sensor.

7. Please **amend** the paragraph which begins on page 29, line 1, as follows:

With continued reference to FIGURES 13A and 13B, thereafter, the anti-stiction techniques of the present invention(s) may be implemented. That is, the anti-stiction channel window ~~56~~ may be etched and/or formed in insulation layer 50 and anti-stiction channel 32 may be etched and/or formed in encapsulation layer(s) 30. The anti-stiction fluid may be introduced into chamber 26 via anti-stiction channel 32 thereby forming, for example, an anti-stiction layer ~~58~~ on mechanical structures 16. Thereafter or concurrently therewith, anti-stiction channel 32 may be closed and/or sealed by channel plug 34 and/or diffusion barrier 64.

8. Please **amend** the paragraph which begins on page 30, line 7, as follows:

In one embodiment, the anti-stiction techniques described and illustrated above are "applied" to the exposed surface of substrate 14. In this regard, anti-stiction channel 32 is formed in substrate 14 and, thereafter an anti-stiction fluid is introduced into chamber 26, as described above. The anti-stiction plug 34 is then deposited and/or formed to "re-seal" chamber 26.